



REDUCING CROSSOVER ACCIDENTS ON KANSAS HIGHWAYS USING MILLED CENTERLINE RUMBLE STRIPS

Report Number: K-TRAN-KSU-00-4

By: Eugene R. Russell and Margaret J. Rys, both with Kansas State University

R E S E A R C H

Introduction

In the USA, shoulder rumble strips are very common. It is estimated that they reduce run-of-the-road crashes up to 25%. The Kansas Department of Transportation (KDOT) has installed rumble strips on the shoulders of almost all state highways in the state. However, Kansas has several miles of two-lane highways with no shoulder. These highways have a number of single vehicle run-of-the-road crashes (both sides) as well as crashes from cars going across the centerline and colliding with on-coming vehicles (crossover crashes). Some U.S. states have been using or experimenting with centerline rumble strips (CLRS). In most states that use them, they are used only on no-passing sections or curves.

Project Objective

KDOT contracted with Kansas State University (KSU) to survey other states and summarize their experience and to develop a research design to evaluate KDOT test installations.

Project Description

KSU surveyed U.S. and Canadian provinces and found no serious negative problems with CLRS and recommended that they be field tested. KSU field tested several patterns of rumble strips, i.e., varying width and spacing. After selecting the best patterns, KDOT installed about 15 miles of two different patterns on the centerline of a two-lane state highway.

Project Results

This K-TRAN report summarizes the findings of safety benefits and non-benefits from this nationwide survey (the authors were contractors on an NCHRP synthesis on U.S. and Canadian experience with CLRS). It describes research on the Kansas test patterns leading to recommendations on the best patterns, and the results and conclusions of field testing of these patterns regarding drivers' acceptance and perceived benefits of CLRS. The overall conclusion of this study is that the safety benefits of CLRS outweigh some non-benefits and they are a viable, low-cost safety device for reducing cross over crashes on two-lane highways.

Report Information

For technical information on this report, please contact: Eugene R. Russell, Kansas State University, 2118 Fiedler Hall, Manhattan, Kansas 66506; Phone: 785-532-1588; fax: 785-532-7717; e-mail: geno@ksu.edu.

For a copy of the full report, please contact: KDOT Library; 700 SW Harrison Street, Topeka, Kansas 66603-3754; Phone: 785-291-3854; Fax: 785-291-3717; e-mail: library@ksdot.org.